

DEPARTMENT OF THE ARMY
PUBLIC WORKS BUSINESS CENTER
HEADQUARTERS, FORT BRAGG GARRISON COMMAND (AIRBORNE)
INSTALLATION MANAGEMENT AGENCY
FORT BRAGG, NORTH CAROLINA

ENVIRONMENTAL ASSESSMENT

FOR

ROTARY-WING AIRCRAFT CORROSION CONTROL FACILITY
FORT BRAGG, NORTH CAROLINA

September 24, 2003


Prepared by:

Public Works Business Center
Environmental Sustainment Office
Headquarters, Fort Bragg Garrison Command (Airborne)
Installation Management Agency
ATTN: AFZA-PW-E
Fort Bragg, North Carolina 28310


In compliance with the
National Environmental Policy Act of 1969

**ENVIRONMENTAL ASSESSMENT
FOR
ROTARY-WING AIRCRAFT CORROSION CONTROL FACILITY
FORT BRAGG, NORTH CAROLINA**

Submitted by:


EVELYN C. WATKINS, Ph.D.
Environmental Specialist


Proponent:



ALBERT N. LOVE
COL, OD
Director of Readiness Business
Center

Date: 2 Oct 03

Date: 3 Oct 03

Environmental Review:



DAVID A. HEINS
Chief, Environmental
Sustainment Division

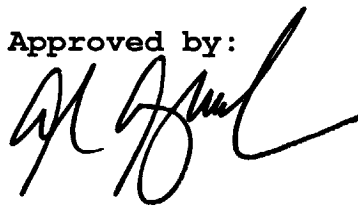

GREGORY G. BEAN
COL, EN
Director of Public Works
Business Center

Date: 2 Oct 03

Date: 3 Oct 03

Legal Review:


MALINDA E. DUNN
COL, JA
Staff Judge Advocate

Approved by:

AL AYCOCK
COL, US Army
Garrison Commander

Date: 6 Oct 03

Date: 7 Oct 03

**DRAFT FINDING OF NO SIGNIFICANT IMPACT
FOR
ROTARY-WING AIRCRAFT CORROSION CONTROL FACILITY
FORT BRAGG, NORTH CAROLINA**

1. PROPOSED ACTION: The Army proposes to construct and operate a rotary-wing aircraft (helicopter) corrosion control facility to strip and paint up to 35 helicopters/year at Simmons Army Airfield (SAAF), Fort Bragg, NC. The purpose of the action is to enable the Army to reduce the time and expense associated with sending all aircraft to distant facilities for corrosion control. The Proposed Action would add one prefabricated booth for stripping paint and one for painting, both inside an existing aircraft hangar bay. No site improvements are needed other than minor modifications to include electrical, water and air hookups to the booths. The facility would be government-owned/contractor-operated. The Proposed Action would return aircraft to Army standards after deployment, as well as provide routine maintenance capability.

2. ALTERNATIVES TO THE PROPOSED ACTION: The Army considered three alternatives to the proposed action: (1) A no-action alternative, which would continue the use of existing helicopter corrosion control facilities for 100% of the requirement. Aircraft needing painting or corrosion checks would be flown to various facilities, primarily the Naval Air Depot at Marine Corps Air Station Cherry Point, NC, for maintenance. This approach is required to establish baseline conditions. (2) Use the corrosion control facility at Pope Air Force Base, NC. This alternative was rejected because of availability of space, use restrictions space and permit limitations. (3) Use the facility at Bluegrass Army Depot, KY. This alternative was rejected because it was the least efficient and most costly alternative.

3. ENVIRONMENTAL AND SOCIOECONOMIC CONSEQUENCES: The Environmental Assessment (EA) evaluates the impacts of construction and operation of the corrosion control facility at SAAF. The major environmental concerns addressed in the EA were air quality, hazardous materials/wastes, and health and safety. The EA identified the following results:

a. The paint currently required on Army aircraft is flammable and contains volatile organic compounds and toxic air pollutants. Fort Bragg's regulated air pollutant emissions will increase less than 3% installation-wide with appropriate emission controls under the Proposed Action. The amounts

emitted would not contribute to or affect local or regional attainment status with National Ambient Air Quality Standards.

b. The proposed action will increase the storage, mixing and use of hazardous materials and the generation of hazardous wastes. Materials will be properly stored, handled and used to avoid any adverse environmental impacts. Fort Bragg and any contractors will dispose of any hazardous wastes in accordance with local, State and Federal requirements. The increase in hazardous waste generated would not be significant.

c. Overexposure or chronic exposure to the paint can cause health hazards. Individuals operating the corrosion control facility will be provided the required appropriate protective equipment and trained in accordance with OSHA guidelines. Ongoing medical screening for workers will be in accordance with regulatory requirements.

4. CONCLUSION: Based on the National Environmental Policy Act (NEPA) analysis provided in the EA, it has been determined that there would be no significant direct, indirect or cumulative effects on the quality of the environment resulting from implementation of the Proposed Action. Therefore, a Finding of No Significant Impact (FNSI) is warranted and an Environmental Impact Statement is not required.

5. PUBLIC REVIEW: The EA and Draft FNSI are available for public review at Cumberland County Public Library (Fayetteville), the John L. Throckmorton Library (Fort Bragg), Pope AFB Library, and at http://www.bragg.army.mil/envbr/nepa_review.htm.

For further information or to provide comment on the proposed action, please contact Headquarters, XVIII Airborne Corps and Fort Bragg, Public Works Business Center, ATTN: AFZA-PW-E (Watkins), Fort Bragg, NC 28310 or email watkine@bragg.army.mil by November 10, 2003.

AL AYCOCK
COL, SF
Garrison Commander

TABLE OF CONTENTS

DRAFT FINDING OF NO SIGNIFICANT IMPACT

ACRONYMS AND ABBREVIATIONS.....	ii
1.0 PURPOSE AND NEED FOR THE ACTION.....	1
2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES.....	3
3.0 EXISTING ENVIRONMENT.....	7
4.0 ENVIRONMENTAL AND SOCIOECONOMIC CONSEQUENCES.....	15
5.0 CONCLUSIONS.....	24
6.0 REFERENCES.....	25
7.0 LIST OF AGENCIES AND PERSONS CONSULTED.....	30

APPENDICES

A Rotary Wing Aircraft Corrosion Control Facility Cost Comparison Analysis.....	A-1
B 2002 Criteria Pollutant Actual Emissions.....	B-1
C 2002 VOC and HAP/TAP Actual Emissions from Surface Coating Operations	C-1
D Aerospace NESHAP MACT in Fort Bragg Title V Air Permit/Summary of Subpart GG of 40 CFR Part 63.....	D-1
E Blast Booth Potential Particulate Emissions.....	E-1

GLOSSARY

ABBREVIATIONS

AAF	Army Air Field
ABN	Airborne
ADNL	A-Weighted Day-Night Level
AFB	Air Force Base
AR	Army Regulation
BACT	Best Available Control Technology
CARC	Chemical Agent Resistant Coating
CFR	Code of Federal Regulations
DA	Department of the Army
dBA	decibel parameter for A-weighted noise
DoD	Department of Defense
EA	Environmental Assessment
EAC	Early Action Compact
EO	Executive Order
EPA	Environmental Protection Agency
FB	Fort Bragg
FNSI	Finding of No Significant Impact
FR	Federal Register
FY	Fiscal Year
GOCO	Government-Owned/Contractor-Operated
HAP	Hazardous Air Pollutants
HM/HW	Hazardous Material/Hazardous Waste
ICRMP	Integrated Cultural Resources Management Plan
INRMP	Integrated Natural Resource Management Plan
MACT	Maximum Achievable Control Technology
MSDS	Material Safety Data Sheet
NAAQS	National Ambient Air Quality Standards
NADEP	Naval Air Depot
NCDENR	North Carolina Department of Environment and Natural Resources
NEPA	National Environmental Policy Act of 1969, as amended
NSR	New Source Review
OSHA	Occupational Safety and Health Act
PSD	Prevention of Significant Deterioration
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
SAAF	Simmons Army Airfield
SOTF	Special Operations Training Facility
TAP	Toxic Air Pollutant
TSDF	Treatment Storage and Disposal Facility
VOC	Volatile Organic Compound

ENVIRONMENTAL ASSESSMENT
FOR
ROTARY-WING AIRCRAFT CORROSION CONTROL FACILITY
FORT BRAGG MILITARY RESERVATION, NORTH CAROLINA

1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 INTRODUCTION.

1.1.1 Fort Bragg and its sub-installation Camp Mackall is a U.S. Army installation which supports the training of assigned active and reserve component units. It serves as headquarters for the XVIII Airborne Corps and Army Special Operations Command and is home to the 82d Airborne Division and Joint Special Operations Command. Units assigned to Fort Bragg represent the spectrum of combat, combat support, and combat service support forces.

1.1.2 The primary mission of Fort Bragg is the training and deployment of military units. Fort Bragg is a power projection platform capable of positioning fighting and support troops anywhere in the world within 18 hours of notification. Lift support for deploying troops is provided by the adjacent Pope Air Force Base. Fort Bragg units have been extensively involved in deployments to southwest Asia and the Middle East for several years.

1.2 PURPOSE AND NEED

1.2.1 The purpose of the Proposed Action is to strip and repaint rotary-wing aircraft (helicopters) assigned to Fort Bragg efficiently and economically. These stripping and painting facilities are frequently referred to as corrosion control facilities. Many of Fort Bragg's rotary-wing aircraft are currently deployed. Because of the deployments, these aircraft will require routine painting or complete stripping and painting when they return. Continued spot painting of aircraft has an impact on operational readiness as the additional paint adds to the helicopter's weight--affecting performance--and does not address corrosion issues. Failure to strip the entire aircraft--as opposed to spot painting worn or corroded areas--would allow corrosion under the paint to go undetected. Fort Bragg/Simons Army Airfield (SAAF) has no aircraft corrosion control facility other than for helicopter rotor blades. As a result, the helicopters are flown to other locations for

painting, where Fort Bragg aircraft are not assured ready support. The closest facility, Naval Air Depot (NADEP) in Cherry Point, NC, cannot even meet the present demand for painting Navy and Marine aircraft (Fennell, 2003), which have priority. A similar situation exists at other facilities because of the aircraft returning from deployments. Because units located at Fort Bragg are continually involved in missions across the globe, the ability to conduct painting and stripping on a timely basis is a must, and without a facility dedicated to serving Fort Bragg units, readiness to conduct these missions is severely hampered. A corrosion control facility at Fort Bragg/SAAF would provide accessible, assured support and would prove to more economical.

1.2.2 The number of aircraft stripped and painted is highly dependent on the funds available. In Fiscal Years 00 and 01 (the last years excluding current deployments), the costs to Fort Bragg for stripping and painting aircraft at NADEP averaged over \$475,000/year, not including flying costs. Substantial long- and short-term savings will be realized from not having to fly the aircraft to other locations for corrosion control, therefore more aircraft could be stripped and painted with available funds (see Appendix A for more detailed analysis).

1.3 SCOPE

1.3.1 Alternatives. This Environmental Assessment (EA) analyzes the beneficial and adverse environmental impacts that may occur as a result of different alternatives for stripping and repainting Fort Bragg's rotary-wing aircraft. Four alternatives were considered: (1) Construct and operate a rotary-wing aircraft corrosion control facility at Fort Bragg, NC, to handle up to 35 aircraft/year (the Preferred Alternative); (2) Continue the use of existing helicopter corrosion control facilities off the installation for 100 percent of the requirement (the No Action Alternative); (3) Use the new corrosion control facility at Pope Air Force Base (AFB), NC; (4) Use the facility at Bluegrass Army Depot, KY. The last two alternatives were not considered in detail because of the additional costs involved or impracticality (see section 2.4).

1.3.2. Resource Areas. The scope of analysis is directly related to the level of impacts expected from implementation of each alternative on individual resource areas. Although all major resource areas were evaluated for potential adverse impacts, the resource areas considered in detail are only those that are areas with a potential to be adversely impacted.

Direct, indirect, and cumulative environmental effects are addressed for potentially impacted media and mitigation measures are identified where appropriate.

2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 BACKGROUND.

2.1.1 Chemical Agent Resistant Coating (CARC). Virtually all combat and combat support equipment, tactical vehicles, aircraft, and secondary item containers are painted with CARC, or chemical agent resistant coating. Its primary purpose is to give a highly durable, non-reflective finish that is easily decontaminated. Further, because CARC paint must also camouflage military vehicles, it has to deliver a low visibility finish and minimal heat and radar signatures. The CARC is formulated with a variety of pigments, heavy metals, and solvents. It cures rapidly as a rough, hard, and inflexible coating. The most commonly used primer is a two-part epoxy, thinned with alcohols and xylene.

2.1.2 Repainting. Per Army Regulation (AR) 750-1, painting will be accomplished only when the present paint is unserviceable or the equipment color is inappropriate for contingency missions. Repainting for the sole purpose of achieving uniformity or for cosmetic purposes is prohibited. As a rule, spot painting should be the standard to correct minor appearance deficiencies and prevent corrosion damage. Aircraft such as the OH-58 and UH-64 cannot be over-sprayed because of weight limitations and must be stripped each time painted (Black, 2003). The CARC can be removed from surfaces by solvents or by being blasted with materials (media) such as sand, steel shot, or plastic or glass beads. All facilities described in this assessment remove paint by blast media. Solvent-based paints removed from the aircraft and the media must be characterized (tested) in accordance with Resource Conservation and Recovery Act (RCRA) requirements and disposed of based on the test results.

2.1.3 Paint Booth and System

2.1.3.1 A paint booth is a power-ventilated structure to enclose, confine and limit escape of paint spray and vapors, and to safely direct them to an exhaust system. The proposed action involves the construction of a "dry-type" spray booth. Dry type spray booths use replaceable fiberglass filters for the intake and exhaust systems.

2.1.3.2 Outside air is drawn into the booth through the intake filters to remove dust particles; and paint-contaminated air is directed through the exhaust filters to capture paint particles and prevent them from entering the atmosphere. This dry-type booth, as proposed for the facility at Fort Bragg, is designed for use during intermittent or limited production spraying.

2.1.3.3 A makeup air unit supplies filtered, outside air to the booth to equal the air volume that is exhausted. The air supplied may or may not be heated to maintain an acceptable temperature inside the booth.

2.1.3.4 A manometer draft gauge provides visual reference when the exhaust filters require replacing. An electrical control panel houses all the electrical components. Various push buttons, relays, and indicator lights control booth operation.

2.1.4 Regulatory Requirements. Federal and State laws and implementing regulations established regulatory requirements for this operation. The requirements are found in the following authorities:

Occupational Safety and Health Administration (OSHA) guidelines in Part 1910, Title 29, Code of Federal Regulations (29 CFR 1910) regarding hazardous substances, safety requirements, training and personal protective equipment for spray painting.

The RCRA, Subtitle C, and 40 CFR 262 for hazardous waste management.

The Clean Water Act and 40 CFR 112 for POL management (spill prevention and pollution control plan).

The Clean Air Act and 40 CFR 50-99 for requirements associated with air quality and permits.

The State of North Carolina Department of Environment and Natural Resources has typically adopted, or been granted the authority to enforce, regulations that are implemented by the Environmental Protection Agency (EPA).

2.2 PROPOSED ACTION

2.2.1 The Proposed Action is to acquire and operate a rotary-wing aircraft corrosion control (stripping and painting) facility at SAAF, Fort Bragg, North Carolina. Fort Bragg would

add one prefabricated blast (stripping) booth and one prefabricated paint booth (each approximately 24' by 24' by 70') inside an existing 150' by 130' aircraft hangar bay in the Air Logistics Management Division (ALMD) Building P-3354. No site improvements are needed other than minor modifications to include electrical, water and air hookups to the booths.

2.2.2 The corrosion control facility would be government-owned/contractor-operated under the ALMD at SAAF. The stripping booth, paint booth and air pollution control equipment would be purchased through a Contractor Acquired Property Request (CAPR). Funds are available in the current contract period to purchase all the stripping and painting equipment; the availability of these funds will expire in November 2003.

2.2.3 The supplier would construct the blast and paint booths. Other personnel will be needed for the roof curb installation, penetration or sealing (for exhaust fans and ductwork); line-side electrical wiring; sprinkler, compressed air, and gas piping; and booth supports or hangars. Installation and wiring would require 3-4 weeks for completion. One forklift and three scissors lifts would be needed during the construction.

2.2.4 Under contract, two workers would operate the stripping booth and two painters (each with a helper) would operate the paint booth. In addition there would be one sheet metal worker and a half-time equivalent environmental compliance worker. When deployed aircraft are returned to SAAF and the contractor's personnel requirements are returned to pre-deployment levels, operation of the blast and paint booths will not require more contract personnel than pre-deployment levels (Phillip Axler, 2003). Utilities needed for the operation include electricity, water, air, and natural gas.

2.2.5 Aircraft would be painted with traditional solvent-based CARC, the only CARC currently approved for painting aircraft. The intent is to switch to water-based CARC when approved for aircraft by Army Materiel Command. The paint booth will include a heater so that when water-based CARC is authorized, the drying will be accelerated. Water-based CARC is very favorable from a permitting and environmental standpoint since there is a substantial reduction in air pollutants (Stancar, 2003).

2.2.6 The proposed operation would require a modification to Fort Bragg's existing Title V air permit. Unless there are operational restrictions and devices to reduce air pollutants, the potential air emissions would exceed the New Source Review

Prevention of Significant Deterioration (PSD) permitting thresholds (Cullen, 2003). Operational restrictions and devices would be used under this proposal in order to avoid the burdens associated with the PSD permitting process, as well as to reduce the environmental impacts.

2.2.7 The number of aircraft painted in the past has varied, based on availability of funding as well as need. Although as many as 44 helicopters have been painted in one year, the average is approximately 25 (Black, 2003). The Proposed Action would allow painting up to approximately 35 helicopters (of a size equivalent to the CH-47 Chinook, Fort Bragg's largest helicopter) per year at the facility. In years when more than 35 aircraft will need corrosion control, the additional aircraft will still be flown to other facilities for stripping and painting.

2.3 NO ACTION ALTERNATIVE: Continue Use at Existing Southeastern Facilities. The No Action Alternative would continue the status quo and provides the baseline against which all other alternatives are examined for impacts. The number of aircraft painted in the past has varied, based on availability of funding as well as need. Although as many as 44 helicopters have been painted in one year, the average is approximately 25 (Black, 2003).

Under this No Action alternative, aircraft needing painting or corrosion checks would be flown in pairs to various facilities. Helicopters are flown in pairs to provide transportation for the aircrew and safety equipment from the aircraft to be painted back to Fort Bragg. The closest facility is the Naval Air Depot at Marine Corps Air Station Cherry Point, NC, approximately 100 miles east of Fort Bragg; most Fort Bragg rotary-wing aircraft are painted there. For fiscal years (FY) 00, 01 and 02, Naval Air Depot Cherry Point painted 49 aircraft for Fort Bragg. Other aircraft have been painted at corrosion control facilities in the Southeast such as at the Bluegrass Army Depot at Lexington, Kentucky, and at facilities in South Carolina and Alabama.

2.4 ALTERNATIVES ELIMINATED FROM DETAILED STUDY

2.4.1 Use facility at Pope Air Force Base. A new fixed-wing aircraft stripping and painting facility is being constructed at Pope AFB, co-located with Fort Bragg. The facility, projected to be complete in Summer 2004, is large enough to accommodate the turboprop C-130J transport airplane (C-130J). The first of

the C-130Js are scheduled to arrive at Pope AFB in FY 2007 (Pickens, 2003). This presented the possibility of painting Fort Bragg helicopters during the first several years after the facility became available, i.e., before Pope's aircraft would need painting. However, this alternative was rejected for a combination of reasons. 1) The 43d Maintenance Group and the 43d Airlift Wing would have to approve the Fort Bragg aviation use, and the air permit would have to be modified. Pope AFB has a 'small source' air permit. Operations are being restricted to keep air emissions below the levels that would require another category of permit; higher categories would result in higher fees and more record keeping. 2) There would be no additional Air Force personnel to operate the painting facility if Fort Bragg aircraft were to be painted there. Contractor personnel would have to be hired. 3) Ramp space would have to be available for rotary-wing aircraft being prepared for painting and there is limited ramp space. 4) Because of the number of Fort Bragg aircraft proposed for repainting, and the length of time to strip and paint, the facility could handle only a small portion of Fort Bragg's paint requirements.

2.4.2 Use Special Operations Forces Support Activity Central Kentucky facility. Under this alternative, aircraft would be flown to the closest Army depot that strips and paints aircraft. This government-owned/contractor-operated facility is Bluegrass Army Depot at Lexington, KY, approximately 450 miles from Fort Bragg. This facility primarily supports rotary-wing aircraft from Special Operations Forces and Fort Campbell, KY. It has been estimated to cost \$1,380,535 to strip and paint 35 aircraft at this facility. The aircraft to be stripped and painted per year were 5 CH-47, 10 UH-60, 10 AH-64, and 10 OH-58. In addition to the costs of stripping and painting, the cost to deliver and return the 35 aircraft to the Bluegrass Army Depot was calculated to be \$617,480. The estimated costs to strip and paint aircraft at SAAF for the same aircraft under the proposed action was \$686,040, a savings of over \$1.3 million per year (Axler, 2003). (The facility costs were spread over five years for this cost comparison.) Also, there are environmental impacts, such as air quality, noise, and fuel usage, associated with the flying of these aircraft. This alternative was rejected as not affordable.

3.0 EXISTING ENVIRONMENT. Due to the added expense and practicability in using the alternatives described above, only two locations were examined in detail in this Environmental Assessment: SAAF and the NADEP at Marine Corps Air Station (MCAS) Cherry Point, NC. Simmons Army Airfield is the location

of the Proposed Action; NADEP is the location for most of the past rotary-wing aircraft corrosion control operations (No Action Alternative).

3.1 SIMMONS ARMY AIRFIELD/FORT BRAGG.

3.1.1 General Location and Description. Simmons Army Airfield and Fort Bragg are located on a portion of the Atlantic Coastal Plain in the Sandhills region of southeastern North Carolina, approximately 10 miles northwest of Fayetteville, North Carolina. Fort Bragg is the home of XVIII Airborne Corps and provides basing and training facilities for both assigned and tenant units. The reservation is irregular in shape, extending almost 30 miles east-west and 12 miles north-south at its widest extent. It covers an area of approximately 168,000 acres, including Camp Mackall (7,9325 acres), eight miles southwest of the main reservation, and SAAF (494 acres), located east of the urbanized cantonment area of Fort Bragg. Pope AFB occupies approximately 1,870 acres immediately north of the cantonment. The cantonment, SAAF and Pope AFB are in Cumberland County. The installations are readily accessible by major East Coast thoroughfares--US 301 and Interstate 95--and adjacent to North Carolina routes 210 and 87.

The terrain in the vicinity of Fort Bragg is largely gently rolling with elevations ranging from 50 to 450 feet above sea level. The soil is mainly a clay-sand mixture. The climate is humid and subtropical, with hot, humid summers and mild winters; snow rarely occurs.

3.1.2 Land Use. The majority of Fort Bragg is an undeveloped rural forested area used for military training, weapon ranges, and parachute drop zones. The surrounding lands are primarily rural-residential and woodlands. About 14,000 acres at the east end of the reservation is developed and includes the cantonment, SAAF and Pope AFB. Simons Army Airfield is the base for Fort Bragg's rotary-wing aircraft operations. Pope AFB is the base for the fixed-wing aircraft, which provide a primary support for troops of both the XVIII Airborne Corps and the 82d Airborne Division for training and deployment. Both facilities support aviation operations and maintenance, flight training, and include appropriate structures such as hangars, runways, and taxiways to support airfield operations.

Simons Army Airfield is a Class A airfield with a 4600 x 100 foot runway with 24-hour, all-weather capabilities. Airspace density and use of SAAF are among the highest Army-wide. Pope

AFB generates most of the air traffic at Fort Bragg and handles larger, fixed-wing aircraft, such as the four-engine turboprop C-130 transport and the C-17 four-engine jet transport, as well as the A-10 jet aircraft.

The proposed corrosion control facility would be placed inside Building P-3354, south of Kiowa Warrior Street at SAAF. This aircraft hangar is located in the Aviation Industrial-Maintenance-Supply District. Adjacent private land use at the reservation boundary, about a half a mile away, is zoned industrial.

3.1.3 Aesthetics and Visual Resources. The landscape in the area for the Proposed Action at SAAF is open, disturbed, built-up land with grass, sparse shrub/tree, or paved cover. No visually sensitive areas are located in or adjacent to the site.

3.1.4 Air Quality. Federal actions are required to conform with applicable State Implementation Plans developed in response to the Clean Air Act, as amended in 1990, under 42 U.S.C 7506. The "General Conformity" rule requires federal agencies to conduct a conformity review for federal actions in National Ambient Air Quality Standards (NAAQS) non-attainment or maintenance areas (non-attainment areas that have reached attainment standards). Because Cumberland County has exceeded the NAAQS 8-hour ozone standard during recent summers, Fort Bragg, the Fayetteville Area, and Cumberland County have entered into an Early Action Compact (EAC) with the EPA and the State of North Carolina to "protect human health by enabling an accelerated local approach to ozone attainment, and to encourage early emission reductions that will ensure attainment of the 8-hour ozone standard." (Palmer, 2003) Because compliance with the EAC defers the non-attainment status, Fort Bragg, Fayetteville and Cumberland County are designated as an attainment area for all criteria pollutants, including ozone; therefore a conformity review is not required for this project.

Fort Bragg manages potential sources of air pollution on the installation (including SAAF) in compliance with its Title V air quality permit, #NC04379T23, which expires 30 November 2005. The Title V Permit covers 58 significant and approximately 810 insignificant sources, with annual permit fees exceeding \$10,000 annually. Significant sources include boilers, incinerators, paint spray booths and some emergency generators. Fort Bragg has seven paint spray booths and one paint mix room. The Title V permit covers five painting operations: three paint spray

booths and a paint mix room at Building Y-4804; one paint spray booth at each of the following: SAAF (Building P-3354), Building F-4334, Building A-4505, and at the Special Operations Training Facility (SOTF).

3.1.5 Noise. The SAAF has moderately high noise levels (65-75 dBA, ADNL¹) generated intermittently by rotary- and some limited fixed-wing aircraft flying into and out of SAAF. Under the Proposed Action the corrosion control facility would be built and operated within an existing structure and would not contribute to any change in environmental noise levels. Although the required construction activities may temporarily add to the ambient noise levels, the average noise levels would not increase; therefore, further analysis of noise impacts is not needed.

3.1.6 Soils. Terrain at SAAF is open with a primarily wooded perimeter and generally level. Site elevation ranges between 224 to 240 feet above sea level. The upland soils of Fort Bragg are sandy, low in organic matter, and low in fertility. The predominant soil map unit at SAAF is the Lakeland-Urban one and complex, one to eight percent slopes. Permeability in Lakeland soil is very rapid, and available water capacity is low. Urban land consists of areas where the original soil has been covered by concrete, asphalt, buildings, or other impervious surfaces; slope is modified to fit the site and commonly ranges from zero to four percent. Because the proposed building would be inside an existing building, adverse impacts are not anticipated from the proposed action. Impacts to soils are excluded from further analysis.

3.1.7 Water Resources. The surface water drainage of SAAF is to the Cape Fear River through the Little River. The Proposed Action site, Building P-3354, is located in an area consisting of buildings, paved areas and associated stormwater drainage structures. Stormwater at the site discharges to the northeast via a 30-inch storm drainage line. The site itself has been previously disturbed by development with no identified open waters, wetland, or floodplain areas located on or near the site. There are no anticipated wastewater or stormwater impacts since the Proposed Action will be contained inside a building

¹ The day-night level (DNL) is the primary description used to assess relative noise levels. This represents a weighted sound level over a 24-hour period, with a 10-decibel penalty added for nighttime noise. A-weighted DNL is used for constant (non-impulsive) noise sources.

and existing water control structures are in place. Because no adverse impacts are anticipated, further analysis is not needed.

3.1.8 Biological Resources. Much of the Fort Bragg is covered by a variety of pine trees (predominantly longleaf pine) mixed with scrub oak undergrowth. The airfields where the helicopter maintenance facilities are located are open grassland areas. There are five federally protected endangered species on Fort Bragg: St. Francis' satyr (a butterfly), the red-cockaded woodpecker, Michaux's sumac, rough-leaved loosestrife, and American chaffseed. The post also provides habitat for an additional 55 plant species of special concern to State and Federal authorities. Because no threatened or endangered species or critical habitats occur within one-half mile of the Proposed Action site, no adverse impacts are anticipated and further analysis is not needed.

3.1.9 Cultural Resources. Fort Bragg manages cultural resources in accordance with the Fort Bragg Integrated Cultural Resources Management Plan. Historic sites on the post include a Civil War battlefield, two historic churches and 27 small community cemeteries. In addition, hundreds of historic and prehistoric archeological sites have been recorded. Structures at SAAF--including the site of the Proposed Action, Building P-3354--have not been examined for determination of the National Register of Historic Places eligibility. This project will have no effect to the structure (Denfeld, 2003). There are also no areas of archaeological significance at the site because of previous construction activities. No adverse impacts are anticipated and further analysis is not needed.

3.1.10 Infrastructure. Fort Bragg operates and maintains extensive water and wastewater systems throughout the facility. Potable water is supplied from the Little River to the installation water treatment plant. Wastewater treatment is accomplished at the Fort Bragg Wastewater Treatment Plant; this plant discharges to the Little River under National Pollution Discharge Elimination System Permit NC003964, expiring 31 May 2006. Fort Bragg has all other necessary infrastructure systems, including natural gas, electrical power, telecommunication lines, and fiber optic cable. The location for the Proposed Action is in an already developed area of Fort Bragg with the necessary infrastructure systems needed to support the Proposed Action present in the building. No adverse impacts are anticipated and further analysis is not needed.

3.1.11 Hazardous and Toxic Materials/Wastes. Hazardous materials/waste management includes control of the purchase, use, storage and disposal of hazardous/toxic materials and waste. Hazardous and toxic materials include (but are not limited to) petroleum products such as aviation fuel, solvents, paint and paint-related material. Fort Bragg coordinates pollution prevention, material storage requirements, and environmental compliance training; monitors the storage of hazardous material and disposal of all hazardous and toxic waste; maintains appropriate permits required by law; and performs periodic inspections of hazardous material/waste sites to ensure environmental compliance. Fort Bragg is a large quantity generator of hazardous waste and operates a RCRA Part B Permitted Treatment Storage and Disposal Facility. Potential impacts of the Proposed Action and the No Action Alternative are addressed in Section 4.2.

3.1.12 Human Health and Safety.

3.1.12.1 Public and Occupational Health and Safety.

Occupational Safety and Health Administration promulgates Federal regulations establishing standards for health and safety in the workplace. The current contractor provides a full-time Environmental, Safety and Health Officer who is assigned to train, inspect, and monitor their aviation logistic support personnel for environmental, safety and health compliance; four days of each week are spent at ALMD (Triplett, 2003). Additional analyses of potential impacts are addressed in Section 4.3.

3.1.12.2 Protection of Children. Executive Order 13045 requires each federal agency to identify and assess environmental health and safety risks that may disproportionately affect children. Environmental health and safety risks include the risks attributable to products or substances that children are likely to come in contact with or ingest. Public access to SAAF is restricted; visitors are required to sign in at the main gate after providing photo identification. A responsible adult must accompany any children allowed in these areas. The closest housing areas are off-post, approximately one mile from the Proposed Action site. No adverse health and safety risks are anticipated from the proposed action.

3.1.13 Socioeconomics. Fort Bragg had an annual operating budget of \$481.8 million in FY 2001. The total direct and indirect economic impact on the local ten-county area was

approximately \$4.7 billion. In FY 2001, the civilian workforce was comprised of 4,126 Department of the Army (DoD) employees and 4,100 additional employees consisting of Non-appropriated Fund, contract, Post Exchange, and other personnel. (XVIII Airborne Corps and Fort Bragg Public Affairs Office Homepage, <http://www.bragg.army.mil/pao/>). There will be no changes to the local economy because of implementation of the Proposed Action.

3.2 NAVAL AIR DEPOT/MARINE CORPS AIR STATION CHERRY POINT, NC.

Unless otherwise noted, the following description of MCAS Cherry Point is taken from Environmental Assessment, Combined and Joint Task Force Exercise 1996 (CJTTFEX 96).

3.2.1 General Location and Description. Marine Corps Air Station (MCAS) Cherry Point is located in Pamlico County in eastern North Carolina. The Station is located in the town of Havelock, NC, and is bordered by the Neuse River to the North and Highway 70 to the south. Pamlico Sound is approximately 50 miles east and the Atlantic Ocean is 20 miles south. The MCAS Cherry Point consists of approximately 11,700 acres, of which approximately 6,336 acres is forested. Broad, flat terraces located between major stream valleys characterize the topography of Cherry Point. Elevation ranges from sea level along the shores of the Neuse River, Slocum Creek and Hancock Creek, to 25 to 33 feet on the terraces between the stream systems.

The NADEP is an industrial tenant at MCAS Cherry Point. The NADEP occupies approximately 144 acres and has fewer than 10 major buildings (Game, 2003).

Land Use. The MCAS Cherry Point provides specialized training for Marine Corps fixed-wing and rotary-wing aviation. The Marine Corps' only Harrier training and only Hercules (KC-130) training squadron are located at the air station. The largest command is the 2d Marine Aircraft Wing. Other commands include Marine Aircraft Group 14, Marine Wing Support Group 27, and Marine Air Control Group 28. The Naval Air Depot and the U.S. Navy are other major tenant units.

(<http://www.cherrypoint.usmc.mil/mission.asp>)

The NADEP at Cherry Point is one of three U.S. Navy depots under the Naval Air Systems Command. The NADEP's central mission is to provide depot-level maintenance, engineering and logistics support to DoD aviation. "In addition to a high-quality product, the depot ensures this support is delivered on time and at the least cost." ([NADEP](#)). NADEP supports mainly helicopters

and vertical-lift aircraft (Game, 2003). For FY 2000, 2001 and 2002, Depot Cherry Point painted 49 aircraft for Fort Bragg. This equates to a total of 10,574 man-hours of work. Aircraft painted were AH-64A, CH-47D, UH-60L and the UH-60A. They have not painted any aircraft during FY03 for Fort Bragg. (Mills, 2003)

3.2.2 Aesthetics and Visual Resources. As at SAAF, the landscape in the area is open, disturbed, built-up land with grass, sparse shrub/tree, or paved cover. No visually sensitive areas are located in or adjacent to the site.

3.2.3 Air Quality. MCAS Cherry Point is located in an area designated as attainment for all criteria pollutants (NAAQS).

3.2.4 Noise. As there will be no change in noise levels associated with the proposed action, noise was not included as an affected resource. Existing ambient noise levels at MCAS Cherry Point are likely to be greater than at SAAF because of the contribution from the fixed-wing aircraft using the station. Noise due to aircraft traveling to and from Fort Bragg would decrease if the Proposed Action is adopted.

3.2.5 Soils. Soils at Cherry Point are composed of loamy sand or sandy loam and are strongly to very strongly acid. The better-drained stream slope soils are composed of loamy sand over a sandy clay loam subsoil and are strongly to very strongly acid. The soils of the broad interstream terraces are generally poorly drained. However, the airfields and NADEP are in areas, which resemble SAAF: The terrain is open and generally level. Portions of the original soil have been disturbed and covered by concrete, asphalt, buildings or other impervious surfaces during construction of the airfield and depot (Habermehl, 2003).

3.2.5 Water Resources. MCAS Cherry Point is bordered on three sides by surface water systems: the Neuse River to the north, Slocum and Tucker creeks to the west, and Hancock Creek to the east. Cherry Point is located within the Neuse River watershed.

3.2.6 Biological Resources. Historically, a wet pine flatwoods community covered much of Cherry Point; however loblolly pine has replaced longleaf pine as the dominant tree at Cherry Point. Wildlife inhabiting terrestrial areas is representative of the wildlife present in the region. The only federally listed species identified as occurring regularly on the Station is the American alligator. The American alligator is associated with the main stream and larger tributaries of Slocum and Hancock

creeks. Wetlands occur throughout Cherry Point. Developed portions of the Station provide limited wildlife habitat, but do support wildlife species typically associated with urban environments.

3.2.7 Cultural Resources. Surveys in 1994 revealed that in addition to the Naval Air Depot (which was identified in 1984 as containing resources potentially eligible for the National Register of Historic Places), several other buildings on the Station were potentially eligible for the National Register. A complete archaeological survey has not been completed, but all known archaeological sites have been marked on the Station. There will be no changes to structures or landscapes associated with the No Action alternative.

3.2.8 Infrastructure. Cherry Point purchases power from Carolina Power and Light. Potable water is derived from 24 deep wells. Sanitary sewage is treated directly at MCAS Cherry Point; wastewater effluent is discharged into the Neuse River. There will be no changes to infrastructure associated with the No Action alternative.

3.2.9 Hazardous and Toxic Materials/Wastes. There will be no changes to existing activities under the No Action Alternative. The NADEP assigns a certain amount of work to the NADEP stripping and painting facility; NADEP fills in with other work from the military services and has a constant demand for their services.

3.2.10 Human Health and Safety. There will be no changes to existing activities under the No Action Alternative. Operations at the NADEP corrosion control facility have stringent controls to maintain within regulatory guidelines.

3.2.11 Socioeconomics. There will be no changes to existing activities under the No Action Alternative. For Fiscal Years 00, 01, and 02, Fort Bragg spent \$1,042,285 for painting helicopters at NADEP Cherry Point (Mills, 2003).

4.0 ENVIRONMENTAL AND SOCIOECONOMIC CONSEQUENCES.

Implementation of the Proposed Action or the No Action Alternative has been determined not to bear on land use, aesthetics and visual resources, noise, soils, water resources, biological resources, cultural resources, or infrastructure, as explained in section 3.12. Socioeconomic effects associated with the proposed action (with the exception of Environmental

Justice) is not further analyzed because no measurable changes in local or regional employment or other economic indicators would be expected from implementation of the Proposed Action or the No Action Alternative.

4.1 AIR QUALITY. The Clean Air Act has established National Ambient Air Quality Standards (NAAQS) for the following six "criteria" air pollutants: carbon monoxide (CO), lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide. It has also established regulations for the control of 189 hazardous air pollutants (HAPs) such as xylene, toluene, and methyl ethyl ketone. No significant adverse impacts to air quality are anticipated from the Proposed Action or the No Action Alternative. Regulated pollutant emissions would not contribute to or affect local or regional attainment status with NAAQS.

4.1.1 Proposed Action. Fort Bragg is a "major source" of both criteria pollutants and hazardous air pollutants (Appendices A and B) and, therefore, operates under its Title V air quality permit, No 04379T23, which expires 30 November 2005. Fort Bragg will be required to modify the existing Title V permit prior to the purchase of any new facility or equipment for this project. As the Proposed Action is located in an attainment area, General Conformity Rule requirements are not applicable.

Fort Bragg has estimated the potential emissions of hazardous/toxic air pollutants (HAP/TAP) as well as volatile organic compounds (VOCs) and other criteria air pollutants from operation of the proposed SAAF corrosion control facility. Potential emissions assume 24/7 operations and are the basis for air permitting thresholds. These emission estimates are calculated using the chemical constituent data listed on the Material Safety Data Sheets (MSDSs) of the various paints/thinners and operational parameters (e.g., number and size of spray guns) identified for the stripping and painting operations at SAAF and on EPA emission factors.

4.1.1.1 Volatile Organic Compounds. Calculations for operation of the proposed paint booth using CARC green Zenthane/thinner mixture resulted in an estimated 187.4 tons per year of potential VOC emissions. To avoid the PSD permitting process, the potential VOC emissions must be less than 40 tons per year. Based on the constituents in the CARC green Zenthane/thinner mixtures, this would limit the painting operation to approximately 1823 hours of spray gun operation per year. Based on an 8-hour workday this equals 228 workdays (or 45

five-day weeks). With a 7-hour workday this equals 260 workdays (52 five-day weeks).

It takes 1 to 2.5 weeks to strip and paint a helicopter, with an average of 1.5 weeks (Axler and Black, 2003). It is estimated that 35 of Fort Bragg's helicopters could be stripped and painted per year. (Stripping and painting would be done in separate booths.) The VOC emissions from painting these aircraft (or their equivalent) at SAAF would be 4,021 pounds (2.0 tons) per year. This analysis was based on an estimate using paint usage for the largest type helicopter (CH-47).

In 2002, Fort Bragg had 74,075 lbs (37.0225 tons) per year in installation-wide VOC emissions (Appendices B and C). Over 7 tons of the VOC emissions were from existing surface-coating operations. Without VOC emission control, the Proposed Action would create an estimated 27 percent increase in VOC emissions from surface coating, and increase of 5 percent in VOC emissions installation-wide.

With emission controls that would remove at least 90 percent of the VOC emissions, the estimated increase in annual installation-wide VOC emissions is less than 3 percent and less than 1 percent for surface coating operations.

Fort Bragg	2002 VOC Emissions	Projected Increase over 2002 Emissions (No Controls)	Projected Increase over 2002 Emissions (After Controls)
Surface Coating VOC Emissions	14,669 lb. (7.33 ton)	27.41%	2.74%
Installation-Wide VOC Emissions	74,075 lb. (37.02 ton)	5.43%	0.54%

Source: Stancar, Cullen and Cross, 2003.

A VOC control system to reduce the emissions by 90 percent or greater would assure compliance with the Early Action Compact with the EPA to encourage early emission reductions and protect human health. The VOC/HAP reduction strategy would also support Fort Bragg's pollution prevention and Sustainability program goals. This proposed action would include a VOC control system. Two VOC control technologies are available: carbon filter (estimated at \$200,000) and thermal oxidation technology (\$500,000-\$800,000), which is more cost-effective long term. No significant adverse impacts are expected to air quality with the addition of VOC controls. In addition, VOC emissions would be

reduced further if AMCOM approves water-based CARC paint for aircraft use.

4.1.1.2 Hazardous/Toxic Air Pollutants. Fort Bragg's Title V air operating permit includes daily/hourly limitations on the following toxic air pollutants: xylene, toluene, methyl ethyl ketone (MEK), methyl isobutyl ketone (MIK). Under the worst-case scenario with surface coating operations occurring 8 hours per day, all of these pollutants are well below the Title V/State standards. No significant adverse impacts are expected from TAP emissions. The VOC controls will reduce these levels further.

Toxic Air Pollutant (TAP)	<u>Standard</u> Chronic Toxicants (lbs/day)	<u>Estimated</u> SAAF New Paint Booth TAPs (lbs/day)	<u>Standard</u> Acute Irritants (lbs/hr)	<u>Estimated</u> SAAF New Paint Booth TAPs (lbs/hr)
Xylene	57	1.45	16.4	0.18
Toluene	98	4.28	14.4	0.53
MEK	78	4.68	22.4	0.59
MIK	52	15.96	7.6	1.99

Source: Stancar, Cullen and Cross, 2003.

4.1.1.3 Aerospace National Emission Standards for Hazardous Air Pollutants (NESHAP). The paint spray booth at SAAF is subject to the aerospace National Emission Standards for Hazardous Air Pollutants (NESHAP) Maximum Achievable Control Technology (MACT). Current aircraft paint operations (on helicopter rotor blades) are exempt due to the low volumes of paint applied. The proposed operation will require modification to Fort Bragg's existing Title V air permit. Procedures for modification to Title V permits fall under three different scenarios: administrative amendments, significant modifications as defined in N.C. Statute 2Q.0516, and all other modifications, referred to as 502(b)(10) modifications. Fort Bragg must complete and submit 502(b)(10) forms modifying Fort Bragg's existing Title V air permit.

The aerospace NESHAP (40 CFR 63, Subpart GG) identifies standards, test methods, monitoring, record keeping, reporting, and performance test requirements for depainting, maskant, cleaning, and primer and topcoat application operations (Appendix D). Daily per-shift monitoring of the paint booth operating parameters is required by the aerospace NESHAP. The facility contractor will be responsible for required monitoring, performance testing and record keeping. Public Works Business

Center Environmental Compliance Branch will prepare and submit required reports to the State. (Cullen, 2003)

4.1.2 No Action Alternative. The NADEP, as a "major source" of criteria pollutants and hazardous air pollutants, operates under a Title V permit, separate from the Title V permit held by Marine Corps Air Station Cherry Point. The State found only one minor notice of violation—a door left open—during a recent compliance inspection. The NADEP's stripping and painting have very rigid operations and maintenance procedures. Government personnel visit during every shift to observe and record operating conditions, a requirement under the aerospace NESHP. The facility is transitioning to automatic observation logs to reduce possibility of mistaken entries on logs. (Game, 2003). Neither continuing to paint the present number of Fort Bragg rotary-wing aircraft at NADEP or reducing the number as a result of the Proposed Action is expected to affect the air quality. The NADEP assigns a certain amount of work to the NADEP stripping and painting facility; NADEP fills in with other work from the military services and has a constant demand for their services.

4.2 HAZARDOUS AND TOXIC MATERIALS AND WASTE.

4.2.1 Proposed Action. The proposed building for this corrosion control facility already has a small operation for painting helicopter rotor blades. However, under the proposed action, Fort Bragg will store, mix, and use more hazardous materials and wastes than presently. The facility operators will be responsible for ensuring that materials are properly stored, handled, and used in accordance with AR 200-1, Fort Bragg (FB) Regulation 200-2, and FB Pamphlet 200-2 to avoid any adverse environmental impacts.

The amount of plastic bead blast media required to strip paint from 35 aircraft using new media each time is 95 55-gallon barrels. Two alternatives exist for the disposal of blast media and the stripped paint: The used media and paint can be disposed of as hazardous waste, or the media can be "leased." If the media had to be disposed of as hazardous waste, the amount of hazardous waste would be considerably less than 95 barrels annually because the media is continuously reused until it is ineffective in removing paint. However, under the proposed action, the blast media would be leased, so that the paint stripped from the helicopters would be returned with the blast media to the supplier for disposal.

Fort Bragg would be directly responsible for disposal of any excess waste thinners or paint, including unused paint mixture from the spray guns, on rags, or other "waste" paint. The estimated amount of green paint mixture needed to paint the 35 aircraft is 875 gallons or less per year. Fort Bragg is required by EO 13148 to reduce the amount of hazardous wastes it generates. The contractor shall have and follow a waste minimization plan to reduce/limit the amount of hazardous waste this operation generates.

Hazardous waste will be contained and turned in properly in coordination with Public Works Business Center staff. Spills occurring shall be reported in accordance with the Spill Prevention Control and Countermeasures Plan (FB Regulation 200-3). Cleanup would be coordinated through the Public Works Business Center's Environmental Compliance Branch. The contractor would be responsible for site cleanup in accordance with State and Federal requirements. No adverse impacts are anticipated.

4.2.2 No Action Alternative. Because NADEP would continue corrosion control operations at the current levels, it is anticipated there would be no significant impacts, either positive or negative, resulting from this alternative.

4.3 HUMAN HEALTH AND SAFETY.

4.3.1 Public and Occupational Health and Safety

4.3.1.1 CARC Hazards. Most paints of this type are considered flammable liquids and will be kept away from sources of heat, spark, and open flame. In paint spraying operations, only the materials needed for one day of work should be present at the work site. Storage will be in approved cabinets for flammable materials or in outside flammable material storage buildings. Smoking, sparks, and open flames will be prohibited in these areas.

The most common health hazards involved with overexposure to CARC paint are irritation of the respiratory tract, nervous system depression, headache, dizziness, unconsciousness, coma, and allergic sensitivity. Chronic exposure may result in asthma-like respiratory disease and symptoms of overexposure are often delayed. Personnel known to be allergic or sensitive to isocyanates should not paint with polyurethanes.

Anyone using polyurethanes more than 30 working days per year should be provided preplacement (before-the-job) medical surveillance. Ongoing medical screening for current workers must be in accordance with regulatory requirements.

OSHA has promulgated regulations for the training and personal protective equipment (e.g., clothing, eye protection, and respirators, including fit) required for personnel performing spray painting. Clothing, when performing CARC painting operations, should provide full skin and eye coverage. In addition there are safety requirements for spray booths (illumination, ventilation, sparks, explosion, non-combustible materials, etc.) identified in 29 CFR 1910.107.

4.3.2.1 Proposed Action. Operations will be conducted in accordance with all applicable State and Federal regulations for health and safety. The paint booth is explosion-proof and will be constructed and operated in accordance with federal standards. Records will be kept of all training and health status, including respiratory function, for corrosion control facility personnel. Because air pollutants will be kept within regulatory limits, proper safety guidelines will be adhered to, and public areas (off-post residential housing) are approximately one mile away, no adverse impacts to health or safety are anticipated for workers or the public.

4.3.1.2 No Action Alternative. Operations will continue to be conducted in accordance with all applicable State and Federal regulations for health and safety. No adverse impacts are anticipated.

4.3.2 Protection of Children. Because there are no significant adverse impacts anticipated from either the Proposed Action or the No Action Alternative, implementing either alternative would not cause disproportionately high and adverse human health, economic or environmental effects upon children within the meaning of EO 13045.

4.4 SOCIOECONOMICS.

4.4.1 Economics.

4.4.1.1 Proposed Action. Under the Proposed Action, there will be an initial outlay at Fort Bragg for the facility and its operation. Seven and one-half full-time positions would be needed to staff the corrosion control facility. There would be

no significant effect on the Fayetteville area's economy if these additional personnel were hired.

This proposed action will have no effect on the economy in the Cherry Point area. Some Fort Bragg aircraft will still be flown to NADEP Cherry Point for painting; even if they were not, the facility would fill in with painting aircraft from other locations (Fennell, 2003).

4.4.1.2 No Action Alternative. There will be no change in present activities under this alternative; therefore there will be no significant impact to the economics in the Fort Bragg or Cherry Point areas.

4.4.2 Environmental Justice. On February 11, 1994, President Clinton signed Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority and Low Income Populations." This Order requires each Federal agency to identify and address any disproportionately high and adverse human health and environmental effects on minority and low-income populations.

4.4.2.1 Proposed Action. Although minority and low-income families are in areas to south of SAAF, they are located off the installation at least one mile from the Proposed Action site. The Proposed Action will be located in a developed area consisting of current aircraft operations, and no changes in health or safety risks are expected. Because no adverse environmental impacts are anticipated as a result of the Proposed Action, no disproportionate effects on low-income or minority populations are expected.

4.4.2.2 No Action Alternative. No changes will occur under the No Action alternative and no disproportionate effects on low-income or minority populations are anticipated.

4.5 CUMULATIVE EFFECTS. According to Council on Environmental Quality regulations, a cumulative impact is one that "results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes other such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."

Fort Bragg/SAAF and Pope AFB were examined as the primary region of influence for the cumulative effects of the preferred

alternative (the Proposed Action). The Proposed Action is not expected to result in any adverse cumulative impacts because (1) The facility will be in compliance with the present air quality standards for the Fayetteville-Cumberland County area; (2) Hazardous wastes generated will be minimized and disposed of in accordance with regulatory requirements; (3) There are no future activities or facilities which would be expected to contribute to degradation of the human or natural environment; and (4) This activity will reduce air quality impacts associated with the transportation and escorting of aircraft to offsite locations.

Fort Bragg currently has facilities for painting land warfare equipment and helicopter rotor blades with CARC paint. Each facility operates under Fort Bragg's Title V air permit, but limits are established for each facility. Appendix C identifies the 2002 VOC and HAP/TAP sources and emissions from surface coating operations. The cumulative effect of adding a paint booth at SAAF is shown in the analysis of Air Quality above. With VOC controls, there will only be a 2.7 percent increase in VOC emissions for surface painting operations and 0.5 percent increase in VOC emissions installation-wide.

Testing to determine if water-based CARC and primer is appropriate for aerospace application (e.g., on aircraft) is scheduled to begin next year. These water-based paints are very favorable from a permitting and environmental standpoint since there is a substantial reduction in air pollutants. If the water-based primer and CARC are approved for this application, there will be a significant beneficial effect. It will take several years before the results of these tests and any approval will occur (Cullen, 2003).

There are no future activities or facilities that are expected to contribute to an adverse hazardous waste impact. The increase in hazardous wastes at Fort Bragg as a result of the Proposed Action is not expected to be significant if the blast media and stripped paint is returned to the supplier. Waste paint and thinner will contribute a small amount of the total hazardous wastes generated on Fort Bragg (Williamson, 2003). Proper management of materials with the potential to become hazardous wastes will mitigate adverse effects. Fort Bragg is actively implementing efforts to reduce hazardous wastes through front-end management of hazardous materials, recycling, and new technology. Conversion to water-based CARC when it is approved for aircraft application will also reduce hazardous wastes.

The 10-Year Modernization Plan/Master Plan for SAAF proposes to build a new hangar for ALMD on the south end of the airfield (Spencer, 2003). The short-range portion of this plan is for FY 2007-2011. The SAAF corrosion control facility in the Proposed Action will be built within the existing ALMD hangar. If a new hangar is funded and built, the corrosion control facility may be moved to the new hangar. If moved, the State would have to be notified to reflect the change of location and any changes to the system. If the old corrosion control structure is replaced, and if any of the operating structures are different, Fort Bragg would have to modify their Title V air permit (Stancar, 2003).

Pope AFB, covering about 1,900 acres, is surrounded on the north, west, and south by Fort Bragg; Pope AFB is constructing a stripping and painting facility for C-130J aircraft, which will add to the air pollutants in the area. Pope AFB is a "small source" of criteria air pollutants. In order to remain a small source and avoid higher category for air permitting, the stripping and painting operation will be limited to keep emissions below the minor and major source thresholds. Pope AFB examined five TAPs from the proposed paint operations: bio-available chromium pigments, MEK, MIB, toluene, and xylene. Toluene and MEK were below the respective allowable toxic pollutant emission rates that would require modeling. Dispersion modeling for the other three TAPs indicated that the potential chromium pigments emitted would be less than 28% of its respective ambient air levels; MIB and xylene emissions would be less than 98% of their respective ambient air levels. Although there will be a slight cumulative increase in air pollutants in the area because of this operation, the small amounts are well below regulatory thresholds. If the Air Force also switches to water-based CARC after its approval on aircraft, the impacts will be reduced.

5.0 CONCLUSIONS.

5.1 FINDINGS AND MITIGATION.

All practicable measures have been taken to avoid or minimize environmental impacts from the Proposed Action. Mitigation actions for the Proposed Action include operational and emission controls for the painting booth. Painting is limited to approximately 1823 hours of spray gun operation per year. With a 7-hour workday this equals 260 workdays (52 five-day weeks). This action will keep the potential VOC emissions below the threshold for PSD permitting requirements. In addition, the VOC control system which will reduce the emissions by 90 percent or

greater will assure compliance with the Early Action Compact as well as support Fort Bragg's pollution prevention and Sustainability program goals. Details are in section 4.1.1.1

Fort Bragg will construct and operate the corrosion control facility in accordance with all applicable local, State and Federal regulations. The facility operators will be responsible for ensuring that materials are properly stored, handled and used in accordance with AR 200-1, Fort Bragg (FB) Regulation 200-2, and FB Pamphlet 200-2 to avoid any adverse environmental impacts. The contractor shall have and follow a waste minimization plan to reduce/limit the amount of hazardous waste this operation generates (see section 4.2.1). Proper management of materials with the potential to become hazardous wastes will mitigate any potential adverse effects. Construction and operations will be conducted in accordance with all applicable State and Federal regulations for health and safety, as identified in section 4.3.1.

It is anticipated that significant impacts to air, land, water, esthetic, socioeconomic, natural and cultural resources will be avoided. Both the Proposed Action and the No Action alternative will maintain compliance with pertinent laws and regulations.

This Proposed Action is environmentally acceptable and would not constitute a major federal action significantly affecting the quality of the human environment within the meaning of Section 102(2)(c) of the National Environmental Policy Act. Therefore, preparation of an Environmental Impact Statement is not required.

5.2 RECOMMENDATION. Pursuant to the Council on Environmental Quality regulations (40 CFR 1500-1508) implementing procedural provisions of the National Environmental Policy Act, a Finding of No Significant Impact (FNSI) is deemed appropriate. Recommend that a notice of availability of a draft FNSI be released to announce this conclusion to the public, and afford them an opportunity to comment on the Proposed Action before rendering a final decision.

6.0 REFERENCES

Axler, Phillip, Internal Review, XVIII Airborne Corps and Fort Bragg (XVIII Abn Corps). Personal communication (telephone) 29 August 2003, Fort Bragg, NC.

Axler, Phillip, Internal Review, and Ken Black, Chief, Air Logistics Management Division, XVIII Abn Corps, "Rotary Wing Aircraft Stripping Booth & Paint Booth Acquisition." Briefing to the Garrison Commander, XVIII Abn Corps, Fort Bragg, NC, 12 August 2003. (Copy of 14 briefing slides)

Beaty, Robert, Chief, Aviation Branch/Airfield Manager, Simmons Army Airfield (SAAF). Personal communication (telephone) 8 September 2003, Fort Bragg, NC.

Biller, Lesley, Permits Section (Air Quality), North Carolina Department of Environment and Natural Resources, "Procedures for Modifying Title V Permits." Memorandum to Alan Klimek, Keith Overcash, et al., Raleigh, NC, 19 July 1999.

Black, Ken, Chief, Air Logistics Management Division, SAAF. Personal communications (telephone and e-mails) 27 August - 12 September 2003, Fort Bragg, NC.

Cross, Cecil, III, Senior Project Manager, Science Applications International Corporation (SAIC), "SAAF Paint Booth Support." E-mail to David Heins, Environmental Sustainment Division Chief, Public Works Business Center (PWBC), Fort Bragg, NC, 8 August 2003.

Cullen, Gary, Air Quality Specialist, Science Applications International Corporation (SAIC), Public Works Business Center Air Program. Personal communications 12 August 2003 - 23 September 2003, Fort Bragg, NC.

Cullen, Gary and Cecil Cross, SAIC, "PSD Avoidance and Operating Restrictions." Briefing 22 August 2003. (Copy of 3 briefing slides)

Denfeld, Duane, Architectural Historian, Cultural Resources Branch, Public Works Business Center. E-mail to Evelyn Watkins, 10 September 2003.

Edwards, Michael SFC, 18th Abn Corps Aviation Maintenance Non-Commissioned Officer-in-Charge, SAAF. Personal communication (telephone) 23 September 2003, Fort Bragg, NC.

Fennell, Mary Beth, Industrial Business Operations Department Head, NADEP Cherry Point. Personal communication

(telephone) 5 September 2003, Fort Bragg-NADEP Cherry Point, NC.

Game, Clifton, Lead Environmental Engineer, NADEP Cherry Point. Personal communication (telephone) 5 September 2003, Fort Bragg-NADEP Cherry Point, NC.

Love, Albert COL, Director of Readiness Business Center, XVIII Airborne Corps and Fort Bragg (XVIII Abn Corps), "Rotary Wing Aircraft Stripping Booth & Paint Booth Acquisition." Briefing to the Chief of Staff, XVIII Abn Corps, Fort Bragg, NC, 14 August 2003. (Copy of 18 briefing slides.)

Mills, Raymond D., Industrial Business Operations Department, NADEP Cherry Point. E-mail to Evelyn Watkins, Fort Bragg, 15 September 2003 and 17 September 2003.

Palmer, J.I., Jr., U.S. Environmental Protection Agency (EPA) Regional Administrator, letter to William G. Ross, Jr., Secretary NC Department of Environment and Natural Resources, Atlanta, GA, 4 February 2003.

Pickens, David, MSG, 43d Maintenance Group Facility Manager, Pope Air Force Base. Personal communication (telephone) 3 September 2003 and 22 September 2003.

Spencer, Aaron J., Chief, Simulations/Standards Branch, SAAF. Personal communication 19 August 2003, Fort Bragg, NC.

Stancar, Joseph, Air Program Manager, Public Works Business Center (PWBC). Personal communications 12 August - 23 September 2003, Fort Bragg, NC.

Stancar, Joseph, PWBC, Gary Cullen and Cecil Cross, SAIC, "Fort Bragg Title V Air Quality Program and Associated Surface Coating Requirements." Briefing 12 August 2003. (Copy of 19 briefing slides.)

Triplett, Ken, Environmental Health and Safety Officer, Lockheed-Martin, SAAF. Personal communication (telephone) 3 September 2003.

XVIII Airborne Corps and Fort Bragg (XVIII Abn Corps). *Long-Range Component Real Property Master Plan, Fort Bragg, North Carolina.* Prepared by Nakata Planning Group and Rust Environment & Infrastructure for U.S. Army Corps of

Engineers (Savannah, GA), Forces Command (Fort McPherson, GA), and XVIII Corps and Fort Bragg (Fort Bragg, NC), 1994.

- _____. *Installation Waste Streams*. XVIII Airborne Corps and Fort Bragg Pamphlet (FB Pam) 200-2. Fort Bragg, NC, 17 April 1996.
- _____. *Fort Bragg Environmental Program*. XVIII Airborne Corps and Fort Bragg Regulation (FB Reg) 200-1. Fort Bragg, NC, 14 April 1999.
- _____. *Installation Spill Contingency Plan, the Spill Prevention, Control, and Countermeasures Plan and the Facility Response Plan*. XVIII Airborne Corps and Fort Bragg Regulation 200-3, Fort Bragg, NC, 14 March 2000.
- _____. *XVIII Airborne Corps and Fort Bragg Integrated Cultural Resources Management Plan (ICRMP)*. Prepared by Griffin Social Technologies, Inc. (Contract No. DAKF40-00-P-0217) for XVIII Airborne Corps and Fort Bragg, Fort Bragg, NC, 2001a.
- _____. *Integrated Natural Resources Management Plan, Fort Bragg and Camp Mackall, North Carolina*. Prepared by Jones Technologies, Inc. and Gene Stout and Associates for Public Works Business Center, XVIII Airborne Corps and Fort Bragg, Fort Bragg, NC, 2001b.
- _____. *Pollution Prevention (P2) Supplement*. XVIII Airborne Corps and Fort Bragg Regulation 200-1 Supplement. Fort Bragg, NC, 10 January 2002.
- _____. *Installation Hazardous Waste Management Plan*. XVIII Airborne Corps and Fort Bragg Regulation 200-2. Fort Bragg, NC, 18 September 2002.
- U.S. Army Corps of Engineers (USACE). *Installation Compatible Use Zone Study: A Report to the Government and Citizens of the Fort Bragg Area*, by Inga Kennedy-Tucker and Steven D. Hottman PhD, Georgia Institute of Technology. Prepared for USACE, Savannah, GA, 1989.
- _____. *Multidisciplinary Environmental Overview Study, Fort Bragg, North Carolina*, by Chris Ingram, Principal Investigator, Gulf Engineers & Consultants, Inc. Final Report, Contract No. DACW 21-89-D-0016. Prepared for USACE, Savannah District, Savannah, GA, 1991.

- U.S. Department of Agriculture (USDA), Soil Conservation Service (SCS). *Soil Survey of Cumberland and Hoke Counties, North Carolina*, by Berman D. Hudson, Washington, DC, 1984.
- U.S. Department of the Army (DA). *Painting and Marking Army Aircraft*. Technical Manual (TM) 55-1500-345-23, 12 June 1986.
- _____. *Natural Resources - Land, Forest and Wildlife Management*. Army Regulation (AR) 200-3, Washington, D.C., 1995.
- _____. *Aviation Unit Maintenance (AVUM) and Aviation Intermediate Maintenance (AVIM) Manual for General Aircraft Maintenance (General Maintenance and Practices), Volume 1*. Technical Manual (TM) 1-1500-204-23-1, 31 July 1992.
- _____. *Environmental Protection and Enhancement*. Army Regulation (AR) 200-1, Washington, D.C., 1997.
- _____. *Cultural Resources Management*. Army Regulation (AR) 200-4, Washington, DC., 1998.
- _____. *Aeronautical Equipment Maintenance Management Policies and Procedures*. Technical Manual (TM) 1-1500-328-23, 30 July 1999.
- _____. *Army Aviation Maintenance*. Field Manual No. 3-04.500 (FM 3-04.500/FM 1-500), 26 September 2000.
- _____. *Army Materiel Maintenance Policy*, Army Regulation (AR) 750-1, Washington, DC, 18 August 2003.
- U. S. Army Combined Arms Support Command and Fort Lee. "TDA Support Maintenance Activity Corrosion Prevention Program Standard Operating Procedures (SOP)", April 1999, Fort Lee, VA. Accessed 26 August 2003 at http://www.lee.army.mil/dol/tda_sup_maint_act.htm.
- U.S. Department of Defense. *Environmental Assessment, Combined and Joint Task Force Exercise 1996 (CJTTFEX 96)*, by Commander, Atlantic Division, Naval Facilities Engineering Command for the Commander in Chief U.S. Atlantic Command, February 1996.

U.S. Marine Corps. "Cherry Point Mission." Part of the official website of MCAS Cherry Point, NC. Accessed 4 September 2003 at <http://www.cherrypoint.usmc.mil/mission.asp>

U.S. Navy. "Depot Facts." Naval Air Depot, Marine Corps Air Station Cherry Point, NC. Accessed 3 September 2003 at <http://www.nadepcp.navy.mil/>.

U.S. President. Executive Order (EO) 12898. "Federal Actions to Address Environmental Justice in Minority Populations." *Federal Register* Vol. 59, 16 February 1994, 7629.

_____. Executive Order (EO) 13045. "Protection of Children from Environmental Health Risks and Safety Risks." *Federal Register* Vol. 62, No. 78, 23 April 1997, 19883-19888.

_____. EO 13101. "Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition." *Federal Register* Vol. 63, 16 September 1998, 49643.

_____. EO 13148. "Greening the Government Through Leadership and Environmental Management." *Federal Register* Vol. 65, 26 April 2000, 24595.

Watson, Jerome, Environmental Manager, 43d Civil Engineer Squadron, Environmental Flight, Pope AFB. Personal communications (telephone) 3 September 2003 and 23 September 2003.

Williamson, Sid, Hazardous Waste Program Manager, Public Works Business Center. Personal communications 8-9 September 2003, Fort Bragg, NC.

7.0 LIST OF AGENCIES AND PERSONS CONSULTED

Contact	Position/Office
Mr. Phillip Axler	Internal Review, XVIII Airborne (Abn) Corps and Fort Bragg
Mr. Robert Beaty	Chief, Aviation Branch/Airfield Manager, SAAF
Mr. Ken Black	Chief, Air Logistics Management Division, SAAF
CPT David Blalock	Environmental Law, Staff Judge Advocate Office, XVIII Abn Corps

Mrs. Virginia Carswell	Contractor, Endangered Species Branch, Public Works Business Center
LTC David C. Cheney	Chief, Aviation Readiness Division 2d Corps Materiel Management Center, 1st COSCOM, XVIII Abn Corps
Mr. Cecil Cross III	Senior Project Manager, Science Applications International Corporation (SAIC)
Mr. Gary Cullen	Air Quality Specialist, Science Applications International Corporation (SAIC), Public Works Business Center Air Program
Mr. Duane Denfeld	Architectural Historian, Cultural Resources Branch, Public Works Business Center
SFC Michael Edwards	18th Abn Corps Aviation Maintenance Non-Commissioned Officer-in- Charge, SAAF
Mr. Colon W. Gaskill	Contractor (EIT), Water Management Branch, Public Works Business Center
CW4 James Habermehl	4/159th Aviation Battalion Maintenance Officer, SAAF
Mr. Andrew Hammonds	Contractor, Hazardous Waste Office Public Works Business Center
Mr. David Heins	Chief, Environmental Sustainment Division, Public Works Business Center
Dr. Christine Gettys Hull	Long-Term Sustainability Planner (Contractor), Environmental Sustainment Division, Public Works Business Center
Mr. Glen Prillaman	Chief, Master Planning, Public Works Business Center
Mr. Ed Schwacke	UST/AST and IRP Manager, Environmental Sustainment Division, Public Works Business Center
Mr. Aaron (Ron) J. Spencer	Chief, Simulation/Standards Branch, and former Airfield Manager, SAAF
Mr. Joseph Stancar	Air/TSCA Program Manager, Public Works Business Center
Mr. Paul Strickland	Safety Technician, Public Works

Mr. Danny Terry	Business Center Environmental Compliance Branch, Public Works Business Center
Mr. Ken Triplett	Environmental Health and Safety Officer, Lockheed-Martin, SAAF
Mr. Sid Williamson	Hazardous Waste Program Manager, Public Works Business Center
Ms. Kristina Wilson	Contractor, Pollution Prevention Program Manager, Environmental Sustainment Division, Public Works Business Center
LTC Gregory G. Woods	Chief, Civil Law, Office of the Staff Judge Advocate, XVIII Abn Corps

POPE AIR FORCE BASE, NORTH CAROLINA

<u>Contact</u>	<u>Position/Office</u>
MSG David Pickens	Facility Manager, 43d Maintenance Group
Mr. Jerome Watson	Environmental Manager, 43d Civil Engineer Squadron, Environmental Flight

NAVAL AIR DEPOT, MCAS CHERRY POINT, NORTH CAROLINA

<u>Contact</u>	<u>Position/Office</u>
Ms. Mary Beth Fennell	Industrial Business Operations Department Head, NADEP
Mr. Clifton Game	Lead Environmental Engineer, NADEP
Mr. Raymond D. Mills	Industrial Business Operations, NADEP

APPENDICES

Appendix A

Rotary Wing Aircraft Corrosion Control Facility Cost Comparison Analysis

1. Proposal. To establish the capability to strip and paint aircraft at SAAF to support reconstitution and routine maintenance for supported units. This will enable Fort Bragg to gain enhanced readiness by guaranteeing priority for Fort Bragg aircraft and save approximately \$1.3 million annually.

2. Cost Analysis of Proposed Action.

(Source: Axler and Black, 2003)

a. Cost of construction and installation:

b. Estimated annual operating costs to strip and paint 35 aircraft at Simmons Army Airfield:

c. Estimated annual costs to paint 35 aircraft at a government-owned/contractor-operated facility (Bluegrass Army Depot, KY):

d. Estimated annual savings:

Appendix B

Fort Bragg 2002 Criteria Pollutant Actual Emissions

Source: Stancar, Cullen and Cross, 2003.

Appendix C

Fort Bragg 2002 VOC and HAP/TAP Actual Emissions from Surface Coating Operations

Source: Stancar, Cullen and Cross, 2003.

Source: Stancar, Cullen and Cross, 2003.

Appendix D

Aerospace NESHAP MACT in Fort Bragg's
Title V Air Permit/
Summary of Subpart GG of 40 CFR Part 63:
National Emissions Standards for Aerospace Manufacturing
And Rework Facilities
(When Using Non Specialty Coatings)

One dry filter-type paint spray booth (ID No. ES-07C) located at Simmons Army Airfield,

The Permittee shall comply with all applicable provisions, including the notification, testing, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111 "Maximum Achievable Control Technology" as promulgated in 40 CFR 63, Subpart GG, including Subpart A "General Provisions **when using nonspecialty coatings.**"

Summary of Subpart GG or 40 CFR Part 63 --National Emission Standards For Aerospace Manufacturing and Rework Facilities

Cleaning Operations:	
Standards	<p>1. Must comply with the following requirements unless the cleaning solvent use is identified in Table 1 below or contains HAP and VOC below the de minimis levels specified in §63.741 (f). [63.744(a)]</p> <p>Table 1 [40 CFR §63.744]</p> <p>Aqueous-----Cleaning solvents in which water is the primary ingredient (80 percent of cleaning solvent solution as applied must be water). Detergents surfactants, and bioenzyme mixtures and nutrients may be combined with the water along with a variety of additives such as organic solvents (e.g., high boiling point alcohols), builders, saponifiers, inhibitors, emulsifiers, pH buffers, and antifoaming agents. Aqueous solutions must have a flash point greater than 93 °C 200 °F)(as reported by the manufacturer) and the solution must be miscible with water.</p> <p>Hydrocarbon based----Cleaners that are composed of photochemically reactive hydrocarbons and oxygenated hydrocarbons and have a maximum vapor pressure 7 mm Hg at 20 °C (3.75 in. H₂O at 68 °F). These cleaners also contain no HAP.</p> <p>2. Place cleaning solvent-laden cloth, paper, or other absorbent applicators in bags or other closed containers upon completing their use. [63.744(a)(1)]</p> <p>3. Store cleaning solvents except semi-aqueous in closed containers. [63.744(a)(2)]</p> <p>Handwipe</p> <p>1. Except for cleaning of spray gun equipment, all hand wipe cleaning solvent must meet a composition requirement as listed in tabel 1 (40 CFR §63.744) as listed above, have a composite vapor pressure 45 mm Hg at 20 °C, or meet the 60 percent volume reduction requirements specified in an alternative compliance plan. [63.744(b)]</p> <p>2. Note the list of 13 cleaning operations exempt from composition, vapor pressure, and volume reduction requirements. [63.744(e)]</p> <p>Spray Gun Cleaning</p> <p>1. Use one of the four specified techniques or their equivalent. [63.744(c)]</p> <p>2. For enclosed spray gun cleaners, if leaks are found during the required monthly inspection, repair as soon as practicable, but within 15 days. [63,744(c)(1)(ii)]</p> <p>3. If cleaning solvent solutions that contain HAP and VOC below the de minimis levels are used, those cleaning operations using such solutions are exempt from requirements. [63.744(c)]</p>

When a national security emergency occurs, the resulting surge conditions shall not be considered in determining compliance 40 CFR Part 63, Subpart GG.

Cleaning Operations: (Continued)			
Standards	Flush Cleaning Operating procedures specify emptying used cleaning solvent into enclosed container, collection system, or system with equivalent emission control. [63.744(d)]		
Test Methods and Procedures	Handwipe 1. Composition determination using manufacture's data. [63.750(a)] 2. Vapor pressure determination using readily available sources such as MSDS if single component; composite vapor pressure determined by manufacturer's supplied data or ASTM E 2260-911 and by equation provided for multiple component solvents. [63.750(b)]		
	Spray Gun Cleaning None	Flush Cleaning None	
Monitoring	Handwipe None [63.751(a)]	Spray Gun Cleaning Monthly visual leak inspection	Flush Cleaning None
Recordkeeping	Handwipe 1. If complying with composition requirements, the name, data/calculations, and annual volumes. [63.752 (b)(2)] 2. If complying with vapor pressure limit, the name, vapor pressure, data/calculations/tests results, and monthly volumes. [63.752 (b)(4)] 3. For noncompliant cleaning solvents used in exempt operations, the name, monthly volumes by operation, and master list of processes. [63.752(b)(4)]		
	Spray Gun Cleaning Record all leaks, including source identification and dates leaks found and repaired. [63.752(b)(5)]		
	Flush Cleaning For semi-aqueous cleaning solvents, the name, data/calculations, and annual volumes. [63.752(b)(2)]		
Reporting	Handwipe 1. Semi-annual report: Statement certifying compliance by responsible official. [63.753(b)(1)(v)] 2. Statement that noncompliant cleaning solvents used. [63.753(b)(1)(i)] 3. New cleaning solvents and their composite vapor pressure or notification of compliance with composition requirements. [63.753(b)(1)(ii)]		
	Spray Gun Cleaning 1. Semi-annual report: Statement certifying compliance by responsible official. [63.753(b)(1)(v)] 2. Statement that noncompliant spray gun cleaning method used. [63.753(b)(1)(iii)] 3. Leaks from enclosed spray gun cleaners not repaired within 15 days. [63.753(b)(1)(iv)]		

When a national security emergency occurs, the resulting surge conditions shall not be considered in determining compliance 40 CFR Part 63, Subpart GG.

Primer and Topcoat Application Operations	
Standards	<p><u>Uncontrolled Primers</u></p> <ol style="list-style-type: none"> 1. Organic HAP and VOC content Limit: 350 gramss per liter (g/L)(22.9 lb/gal less water for HAP; and less water and exempt solvents for VOC) as applied. [63.745(c)(1-2)] 2. Achieve compliance through: (1) using coatingss below content limits, or (2) using monthly volume-weighted averaging to meet content limits. [63.745(e)] <p><u>Uncontrolled Topcoats</u> (including self-priming tools)</p> <ol style="list-style-type: none"> 3. Organic HAP and VOC content limit: 420 g/L (3.5 lb/gal less water for HAP; and less water and exempt solvents for VOC) as applied. [63.745(c)(3-4)] 4. Achieve compliance through: (1) using coatingss below content limits, or (2) using monthly volume-weighted averaging to meet content limits. [63.745(e)] <p><u>Controlled Primers and Topcoats</u> (including self-priming tools)</p> <ol style="list-style-type: none"> 5. Control system must reduce organic HAP and VOC emissions to the atmosphere 81 percent, using capture and destruction/removal efficiencies. [63.745(d)] <p><u>All Primers and Topcoats</u></p> <ol style="list-style-type: none"> 6. Minimize spills during handling and transfer. [63.745 (b)] 7. Specific application techniques must be used. [63.745(f)(1)] 8. Exemptions from specific application techniques must be used for certain situations. [63.7459f)(3)] 9. All application equipment must be operated according to manufaturer's specifications, company procedurs, or locally specified operating procedures (whichever is most stringent). [63.745(f)(2)] 10. Operating requirements for the application of primers or topcoats that contain inorganic HAP, including control with either particulate filters (see Tables 1 through 4 of 63.745) or waterwash system. Painting operation(s) must be shutdown if operated outside manudacturer's specified limits. [63.745(g)(1) through (3)] 11. Exemptions from operating requirements for the application of primers or topcoats that contain inorganic HAP, including control with either particulate filters or waterwash system. provided for certain application operations. [63.745(g)(4)]
Performance Test Periods and Tests	<p><u>Uncontrolled</u></p> <ol style="list-style-type: none"> 1. Performance test period for coatings not averaged: each 24 hour period; for "averaged"coatings each 30-day period. [63.749(d)(1)] <p><u>Controlled</u></p> <ol style="list-style-type: none"> 2. Performance test period for noncarbon adsorber: three 1-hour runs; for carbon adsorber: each rolling material balance period. [63.749(d)(1)] 3. Initial performance test required for all control devices to demonstrate compliance with overall control efficiency requirement. [63.749(d)(2)]

When a national security emergency occurs, the resulting surge conditions shall not be considered in determining compliance 40 CFR Part 63, Subpart GG.

Primer and Topcoat Application Operations (Continued)	
Tests Methods and Procedures	<p><u>Organic HAP</u></p> <ol style="list-style-type: none"> 1. Organic HAP level determination procedures. [63.750(c) and (d)] 2. VOC level determination procedures. [63.750(e) and (f)] 3. Overall control efficiency of carbon adsorber system determined using provided procedures; for other control devices, determine capture efficiency and destruction efficiency. For capture efficiency, use procedure T in Appendix B to 40 CFR 52.741 for total enclosures and 40 CFR 52.741(a)(4)(iii) procedures for all other enclosures. [63.750(g) and (h)] 4. For alternative application methods, first determine emission levels for initial 30-day period or five aircraft using only HVLP or electrostatic, or a time period specified by the permitting agency. Then use alternative application method for period of time necessary to coat equivalent amount of parts with same coatings. Alternative application method may be used when emissions generated during the test period are less than or equal to the emissions generated during the initial 30-day period or live aircraft. Dried film thickness must be within specification for initial 30-day period or five aircraft as demonstrated under actual production conditions. [63.750(i)] <p><u>Inorganic HAP</u></p> <ol style="list-style-type: none"> 5. Dry particulate filter certification; use Method 319 to meet or exceed the efficiency data points in Tables 1 and 2 of §63.745 for existing sources, or Tables 3 and 4 of §63.745 for new sources [63.750 (o)]
Monitoring	<ol style="list-style-type: none"> 1. Carbon adsorbers. [63.751(1)(b) through (7)] 2. Temperature monitoring equipment to be installed, calibrated, maintained, and operated according to manufacturer's specifications. Use CEMS as an alternative. [63.751(b)(8)] 3. Incinerators. [63.751(b)(9) through (12)] 4. Dry particulate filters and waterwash systems. [63.751(c)] 5. Alternate monitoring method. [63.751(c)]
Record keeping	<ol style="list-style-type: none"> 1. Name and VOC content as received and as applied for all primers and topcoats. [63.752(c)(1)] <p><u>Uncontrolled</u></p> <ol style="list-style-type: none"> 2. For "compliant" coatings, organic HAP and VOC contents as applied, data/calculations and test results used to determine HAP/VOC contents (H_i and G_i), and monthly usage. [63.752(c)(2)] 3. For "low-HAP content" primers, annual purchase records, and data/calculations and test results used to determine H_i or HAP/VOC content as applied. [63.752(c)(3)] 4. For "averaged" coatings, monthly volume-weighted average values of HAP/VOC content (H_a and G_a), and data/calculations and test results used to calculate H_a and G_a. [63.752(c)(4)]

When a national security emergency occurs, the resulting surge conditions shall not be considered in determining compliance 40 CFR Part 63, Subpart GG.

Primer and Topcoat Application Operations (Continued)	
Recordkeeping (Continued)	<p><u>Controlled</u></p> <p>5. For incinerations, overall control efficiency test results/data/calculations used in determining the overall control efficiency; and continous records of incinerator temperature(s). [63.752(c)(5)]</p> <p>6. For carbon adsorbers, overall control efficiency and length of rolling period and all supporting test results/data/calculations used in determining the overall control efficiency. [63.752(c)(6)]</p> <p><u>Inorganic HAP Particulate</u></p> <p>7. Pressure drop across filter or water flow rate through waterwash system once per shift, and acceptable limits. [63.752(d)(1) through (3)]</p>
Reporting	<p><u>Semiannual</u> (six months from the date of notification of compliance status)</p> <p>1. All instances where organic HAP/VOC limits were exceeceeded. [63.753(c)(1)(i) and (ii)]</p> <p>2. Control device exceedances (out-of-compliance). [63.753(c)(1)(iii), (iv), and (v)]</p> <p>3. Periods when operation not immediately shut down when the pressure drop or water flow rate was outside limits. [63.753(c)(1)(vi)]</p> <p>4. Statement certifying compliance. [63.753(c)(1)(vii)]</p> <p><u>Annual</u> (twelve months from the date of notification of compliance status)</p> <p>5. Number of times the pressure drop or water flow rate limits were exceeded. [63.753(c)(2)]</p>
Depainting Operations	
Exemptions	<p>1. Facilities depainting six or less completed aerospace vehicles per calendar year. [63.746(a)]</p> <p>2. Depainting of parts or units normally removed from the plane for depainting (except wings and stabilizers). [63.746(a)(1)]</p> <p>3. Aerospace vehicles or components intended for public display, no longer operational, and not easily capable of being moved. [63.746(a)(2)]</p> <p>4. Depainting of radomes and parts, subassemblies, and assemblies normally removed from the primary aircraft before depainting. [63.746(a)(3)]</p>
Standards	<p>1. Zero organic HAP emissions from chemical strippers or softeners. [63.746(b)(1)]</p> <p>2. Minimize iorganic HAP emissions when equipment malfunctions. [63.746(b)(2)]</p> <p>3. Facility (average) allowance for spot stripping and decal removal; 26 gallons of strippers or 190 pounds of HAP per commercial aircraft per year; and 50 gallonss of strippers or 365 poundss of HAP per military aircraft per year. [63.746(b)(3)]</p> <p>4. Follow operating requirementss for depainting operations generating airborne inorganic HAP. [63.746(b)(4)]</p> <p>5. Mechanical and hand sanding are exempt from requirements of §63.746(b)(4). [63.746(b)(5)]</p> <p>6. Control HAP emissions at 81 percent efficiency for systems installed before effective date (September 1, 1995), and 95 percent efficiency for newer systems. [63.746(c)]</p>

When a national security emergency occurs, the resulting surge conditions shall not be considered in determining compliance 40 CFR Part 63, Subpart GG.

Depainting Operations (Continued)	
Performance Test Periods and Tests	<p><u>Organic HAP</u></p> <ol style="list-style-type: none"> 1. Initial performance test of all control of all control devices is required to demonstrate compliance with overall control efficiency requirement. [63.749(f)(1), (f)(2), and (f)(3)] 2. Performance Test Period for noncarbon adsorber, three 1-hour test runs; for carbon adsorber each rolling material balance period. [63.749(f)(1)] 3. Test period for spot stripping and decal removal usage limits: each calendar year. [63.749(f)(1)] <p><u>Inorganic HAP</u></p> <ol style="list-style-type: none"> 4. Operating requirements specified in § [63.746(b)(4)], [63.749(g)]
Test Methods and Procedures	<p><u>Organic HAP</u></p> <ol style="list-style-type: none"> 1. Overall control efficiency of carbon adsorber system may be determined using specified procedures and equations 9 through 14; for other control devices, must determine capture and destruction efficiencies (use equations 15 through 18 to calculate overall control efficiency). For capture efficiency, use Procedure T in Appendix B to 40 CFR 52.741 for total enclosures and 40 CFR 52.741(a)(4)(iii) procedures for all other enclosures. [63.750(g) and (h)] 2. Spot stripping and decal removal: Procedures are provided for determining volume of chemical strippers (equation 20) or weight of organic HAP used per aircraft (equation 21). [63.750(j)] <p><u>Inorganic HAP</u></p> <ol style="list-style-type: none"> 3. Dry particulate filter certification: use Method 319 to meet or exceed the efficiency data points in Tables 1 and 2 of §63.745 for existing sources or Tables 3 and 4 of §63.745 for new sources. [63.750(o)]
Monitoring	Continuously monitor the pressure drop across filters, or the water flow rate through the waterwash system and read and record the pressure drop, or the water flow rate for waterwash system, once per shift. [63.751(d)]
Recordkeeping	<ol style="list-style-type: none"> 1. Name and monthly volumes of each chemical stripper used or monthly weight of organic HAP used in chemical strippers. [63.752(e)(1)] 2. For controlled chemical strippers (carbon adsorber), overall control efficiency and length of rolling period and all supporting test results/data/calculations; certification of the accuracy of the device. [63.752(e)(2)] 3. For controlled chemical strippers (other control devices), overall control efficiency and supporting test results/data/calculations. [63.752(e)(3)] 4. List of parts/assemblies normally removed. [63.752(e)(4)] 5. For nonchemical based equipment, name and type, and malfunction information including dates, description, and alternative methods used. [63.752(e)(5)] 6. For spot stripping and decal removal, volume of stripper or weight of organic HAP used, annual number of aircraft stripped, annual average volume or weight per aircraft, and all data/calculations used to calculate volume or weight per aircraft. [63.752(e)(6)] 7. Pressure drop across filter or the visual continuity of the water curtain and water flow rate for waterwash systems, once per shift and include acceptable limits. [63.752(e)(7)]

When a national security emergency occurs, the resulting surge conditions shall not be considered in determining compliance 40 CFR Part 63, Subpart GG.

Depainting Operations (Continued)	
Reporting	<p><u>Semiannual</u> (6 months from the date of notification of compliance status)</p> <ol style="list-style-type: none"> 24-hour periods where organic HAP were emitted from depainting operations. [63.753(d)(1)(I)] New/reformulated chemical strippers and HAP contents. [63.753(d)(1)(ii), (iii), and (iv)] New nonchemical depainting techniques. [63.753(d)(1)(v)] Malfunction information or nonchemical depainting techniques including dates, description, and alternative methods used. [63.753(d)(1)(vi)] Periods when operation not immediately shut down when the pressure drop or water flow rate was outside limits. [63.753(d)(1)(vii)] List of new/discontinued aircraft models and, for new models, list of parts normally removed for depainting. [63.753(d)(1)(viii)] Organic HAP control device exceedances. [63.753(d)(3)] Statement certifying compliance. [63.753(d)(1)(ix)] <p><u>Annual</u> (12 months from the date of notification of compliance status)</p> <ol style="list-style-type: none"> Exceedances of average annual volume or weight allowance for spot stripping and decal removal. [63.753(d)(2)(I)] Number of times the pressure drop or water flow rate limits were exceeded. [63.753(d)(2)(ii)]
Maskant Operations	
Standards	<p>Minimize spills during handling and transfer [63.747(b)]</p> <p><u>Uncontrolled Maskants</u></p> <ol style="list-style-type: none"> Organic HAP emissions: ≤ 622 g/l (5.2 lb/gal) (less water) as applied for Type I; ≤ 160 g/L (1.3 lb/gal) (less water) as applied for Type II. [63.747(c)(1)] VOC emissions: ≤ 622 g/l (5.2 lb/gal) (less water and exempt solvents) as applied for Type I, ≤ 160 g/L (1.3 lb/gal) (less water and exempt solvents) as applied for Type II. [63.747(c)(2)] Exemption for touch-up of scratched surfaces, damaged maskant, and trimmed edges. [63.747(c)(3)] Comply by either: (1) using maskants below content limits, or (2) using monthly volume-weighted averaging provisions described in §63.743(d). [63.747(e)] <p><u>Controlled Maskants</u></p> <ol style="list-style-type: none"> If control device is used, system must capture and control all emissions from maskant operation and must achieve an overall control efficiency of at least 81.%. [63.747(d)]
Performance Test Periods and Tests	<p><u>Uncontrolled</u></p> <ol style="list-style-type: none"> Performance Test Period for maskants that are not averaged, each 24-hour period; for maskants that are averaged, each 30-day period (unless otherwise specified). [63.749(h)(1)] <p><u>Controlled</u></p> <ol style="list-style-type: none"> Performance Test Period for noncarbon adsorber, three 1-hour test runs; for carbon adsorber, each rolling material balance period. [63.749(h)(1)] Initial performance test required for all control devices to demonstrate compliance with overall control efficiency requirement. [63.749(h)(2)]

When a national security emergency occurs, the resulting surge conditions shall not be considered in determining compliance 40 CFR Part 63, Subpart GG.

Maskant Operations (Continued)		
Test Methods and Procedures	1. 2. 3.	Organic HAP level determination procedures. [63.750(k) and (l)] VOC level determination procedures. [63.750(m) and (n)] Overall control efficiency of carbon adsorber system determined using specified procedures and equations 9 through 14; for other control devices, determine capture and destruction efficiencies (use equations 15 through 18 to calculate overall control efficiency). For capture efficiency, use Procedure T in Appendix B to 40 CFR 52.741 for total enclosures and 40 CFR 52.741(a)(4)(iii) procedures for all other enclosures. [63.750(g) and (h)]
Monitoring	1.	Incinerators and carbon adsorbers: temperature sensors with continuous recorders for incinerators; and install, calibrate, maintain, and operate temperature monitors according to manufacturer's specifications. Use CEMS as an alternative. [63.751(b)]
Recordkeeping	<u>Uncontrolled Maskants</u> 1. For maskants not averaged, mass of organic HAP and VOC emitted per unit volume of chemical milling maskant (less water for HAP; and less water and exempt solvents for VOC) (H_i and G_i); all data, calculations, and test results; monthly volumes of each maskant. [63.752(f)(1)] 2. For "averaged" maskants, monthly volume-weighted average mass of organic HAP or VOC emitted per unit volume of chemical milling maskant as applied (less water for HAP; and less water and exempt solvents for VOC) (H_a and G_a); all data, calculations, and test results. [63.752(f)(2)] <u>Controlled Maskants</u> 3. For carbon adsorbers, overall control efficiency and length of rolling period and all supporting test results/data/calculations used in determining the overall control efficiency; certification of the accuracy of the device that measures the amount of HAP or VOC recovered. [63.752(f)(3)] 4. For incinerators, overall control efficiency; test results, data, and calculations used in determining the overall control efficiency; length of rolling material balance period with data and calculations; record of certification of the accuracy of the device that measures amount of HAP or VOC recovered; or record of carbon replacement time for nonregenerative carbon adsorbers; and incinerator temperature(s). [63.752(f)(4)]	
Reporting	<u>Semiannual</u> (6 months from the date of notification of compliance status) 1. Exceedances or organic HAP/VOC limits. [63.753(e)(1) and (2)] 2. Control device exceedances (out of compliance). [63.753(e)(3)] 3. New maskants. [63.753(e)(4)] 4. New control devices. [63.753(e)(5)] 5. Statement certifying compliance. [63.753(e)(6)]	

When a national security emergency occurs, the resulting surge conditions shall not be considered in determining compliance 40 CFR Part 63, Subpart GG.

Appendix E

Fort Bragg Blast Booth Potential Particulate Emissions

Source: Stancar, J., G. Cullen and C. Cross, 2003.

GLOSSARY

Attainment area -- A geographic area in which levels of a criteria air pollutant meet the health-based primary standard (NAAQS) for the pollutant. An area may have an acceptable level for one criteria air pollutant, but may have unacceptable levels for others. Thus, an area could be both attainment and nonattainment at the same time. Attainment areas are defined using federal pollutant limits set by EPA.

Generator - any person, by site, whose act or process produces hazardous waste identified or listed in 40 CFR 261, or whose act first causes a hazardous waste to become subject to regulation (40 CFR 260.10). (NOTE: This typically is used to refer to a facility producing hazardous waste in quantities greater than 1000 kg/mo.)

Hazardous or Toxic Materials - materials defined in section 101 of the *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA) or that are of an explosive, flammable, or pyrotechnic nature (DODD 6050.8, Section C).

Hazardous Waste - a solid waste identified as a characteristic or listed hazardous waste in 40 CFR 261.3 (40 CFR 260.10).

Nonattainment area -- a geographic area in which the level of a criteria air pollutant is higher than the level allowed by the federal standards. It has been estimated that 60% of Americans live in nonattainment areas.

Ozone - a form of oxygen that is formed naturally in the upper atmosphere by a photochemical reaction with solar ultraviolet radiation.

Particulate Matter Emissions - any airborne, finely divided solid or liquid material, except uncombined water, emitted to the ambient air (40 CFR 60.2).

PM10 - particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (40 CFR 58.1).

Volatile Organic Compound (VOC) - any compound of carbon--excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate--that participates in atmospheric photochemical reactions (40 CFR 51.100).